

Awareness, perception and practice regarding orthodontic practice and principles among non orthodontic specialists- An exploratory research

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ABSTRACT

Background: Non-orthodontics specialist should have the responsibility of taking care of the smiles of the patients. This also has the implications on the oral health of the patient. The present study was done to determine awareness, perception, and practice regarding orthodontic practice and principles among non-orthodontic specialists. **Materials and Methods:** The present study is a cross-sectional descriptive questionnaire study conducted among non-orthodontic specialists working in private clinics. The survey was conducted in among 212 non-orthodontic specialists. In the present study a close ended interview schedule was prepared to perception and practice of Dental specialists. After entry of data in Microsoft excel 2007. SPSS version 19.0 is used to analyze the data. **Results:** Dental specialists have moderate awareness, positive perception and poor practice regarding Orthodontic practice and principles. Awareness regarding, Orthodontic was significantly ($P = 0.02^*$) associated with practice while Perception was significantly associated ($P = 0.00^*$) with Awareness. Age group was significantly ($P = 0.01^{**}$) associated with awareness of study participants. Specialty and year of practice of dental professional was significantly ($P = 0.05^*$), ($P = 0.00^{***}$) associated with perception regarding Orthodontic practice and principles. Number of Orthodontic patients treating per months was significantly associated ($P = 0.00^{***}$) with Practice of study participants of Orthodontic practice and principles. **Conclusion:** From above it has been concluded that dental specialists has moderate awareness, positive perception and poor practice regarding Orthodontic practice and principles. Age group, type of Specialty, Year of practice and number of Orthodontic cases treated per month significantly associated with awareness, perception, and practice of dental professionals regarding Orthodontic practice and principles.

Keywords: Awareness, orthodontics, perception

Introduction

Malocclusion is characterized as an “impediment in which there is a molar connection between the curves in any of the

planes of spaces or in which there are inconsistencies in tooth position past as far as possible.” Malocclusion normally makes sentiment of disgrace for their facial appearance and may likewise give sentiment of modest in their society.^[1] Mal-positioning of the tooth may likewise moreover incite inconvenience in utilitarian advancements of the mandible, obstructions in biting, deglutition, explanation, and probability to damage or

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Received: 02-12-2019

Revised: 11-01-2020

Accepted: 22-01-2020

Published: 28-02-2020

Access this article online

Quick Response Code:



Website:
www.jfmpc.com

DOI:
10.4103/jfmpc.jfmpc_1099_19

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How to cite this article: Sahu A, Sawai DS, Tanwar AS, Jha A, Sinha G, Kumar S. Awareness, perception and practice regarding orthodontic practice and principles among non orthodontic specialists- An exploratory research. J Family Med Prim Care 2020;9:585-9.

periodontal pathologies.^[2] And the strength of dentistry that manages the finding, aversion and adjustment of Malocclusion is called Orthodontics. It can likewise concentrate on altering facial development, known as dento-facial orthopedics.^[3]

The results of the orthodontic treatment are counteractive action of tissue harm, improvement in physical capacity and stylish. The other real advantages are improving personal satisfaction, advancement of self-assurance; and physical, mental and social changes.^[1,2,4,5]

It is critical to instruct the people about the advantages of the orthodontic treatment. This can be cultivated by a multi-disciplinary methodology in which general dental professionals and other non-orthodontic fortes can assume the job of oral orthodontic wellbeing teachers, yet just in the event that they have great learning and frame of mind of standards and routine with regards to orthodontic treatment. Lew^[6] has additionally expressed that “experts should concentrate past the orthodontic mechano-therapy to the more emotional parts of patient inconvenience and frame of mind toward treatment.”^[7]

Different studies^[8,9] in the past had announced that non-orthodontic claims to fame have constrained learning in regards to Orthodontic practice and standards. Accordingly, there is a need to distinguish the information levels of non-Orthodontic strengths as for the orthodontic treatment as they assume a significant job in teaching solid way of life practices to their patients. In this manner, the point of present examination is to decide mindfulness, discernment, and work on with respect to orthodontic practice and standards among non-orthodontic pros.

Materials and Methods

The present study is a cross-sectional descriptive questionnaire study conducted among non-Orthodontic specialists working in private clinics in Dehardun city. The study was conducted in the month of July 2019. Ethical clearance was obtained from the institutional review board on 14/05/2019.

The city was divided into 4 directions north, south, east and west. From each direction 4 dental clinics were selected randomly. Those dental clinics were selected in which Non-Orthodontic specialists were there. In selected clinics consent was availed from dentists and those given consent were included in the study. If a dental practitioner refuses to give his or her consent, other clinic was included in the study. If at the time of survey due to patient appointment dental professional does not take up the survey, the questionnaire was given to assistant to be filled and collected later. The survey was conducted in among 212 non-Orthodontic specialists.

A pilot survey was conducted, before the main survey on some of the total study participants to test the validity and reliability of questionnaire. Reliability of the Questionnaire was

determined by using Test-Retest and the values of measured Kappa (k) = 0.95 Weighted Kappa (k_w) = 0.90. Internal consistency of questionnaires was measured by applying Cronbach's-Alpha (α) and the value of α = 0.91 was measured. Those questions with less validity and reliability were removed.

In the present study a close ended interview schedule was prepared to perception and practice of dental specialists. It consists of four parts. First part consists of demographic details of patients which includes age, gender, socioeconomic status (education, occupation, and income), dental specialty, year of practice, orthodontic patients treated per month.

Second part consists of questions related to awareness of non-orthodontic specialists regarding orthodontic practice and principles. Third part consists of questions regarding perception of non-orthodontic specialists regarding orthodontic practice and principles. Fourth part consists of questions regarding practice of study participants.

Regarding awareness, on each correct answer 1 point given and 0 for wrong answer or don't know. The score for awareness ranges from 0 to 8 with 0–3 poor awareness, 4–6 fair awareness, 7–8 good awareness. Perception of study participants measured on likert scale. Starting from 4-strongly disagree, 3-disagree, 2-agree, 1-strongly agree. The score for perception ranges from 6–24, With 6–12 negative perception, 13–18 Neutral perception, 19–24 positive perception. Practice score were measured as 0 given to No and 1 given yes answer, practice scores ranges from 0–9 with 0–3 poor practice, 4–6 fair practice and 7–9 good practice.

Statistical analysis

After entry of data in Microsoft excel 2007. SPSS version 19.0 is used to analyze the data. Descriptive statistics is used to determine demographic details and awareness, perception and practice of study participants regarding orthodontic practice and principles. Correlation analysis was used to determine association between awareness, perception and practice of study participants. Chi-square test was used to find the association between demographic details and awareness, perception, and practice of study participants.

Results

Table 1 shows that majority of study participants {69 (32.54%)} were in the age group of 36-40 years. Male study participants {179 (39.55%)} were more than female. Most of the Dental professionals were Prosthodontists {59 (27.83%)}. Among all study participants, {84 (39.62%)} of them were practicing for 6–10 years. Most of the dental specialists {121 (57.07%)} were in the middle class. Most of them {117 (55.18%)} treats about 1–5 Orthodontic patients per months.

Table 2 shows that majority of Dental specialists {(50.94%)} had awareness scores regarding Orthodontic practice and principles were moderate. Perception regarding the Orthodontic practice

Table 1: Demographic Details of study participants (n=212)

Demographic Variables		Number (n)	Percentage
Age in years	25-30 Years	51	24.05
	31-35 Years	58	27.35
	36-40 Years	69	32.54
	More than 40 years	34	16.06
	Total	212	100%
Gender	Male	179	39.55
	Female	33	60.45
	Total	212	100%
Specialty	Endodontic	38	17.92
	Prosthodontics	59	27.83
	Oral Pathologist	21	9.90
	Oral medicine	17	8.01
	Oral surgeon	43	20.28
	Periodontists	22	10.37
	Public Health dentists	12	5.69
	Total	212	100%
Year of Practice	1-5 years	72	33.96
	6-10 years	84	39.62
	More than 10 years	56	26.42
	Total	212	100%
Socioeconomic class	Upper	68	32.07
	Middle	121	57.07
	Lower	23	10.86
	Total	212	100%
Number of orthodontic patients treating per months	1-5	117	55.18
	6-10	87	41.03
	More than 10	08	3.79
	Total	212	100%

Table 2: Awareness, perception and practice scores regarding Orthodontic practice and principles of study participants

Variables	Number of subjects	Percentage of subjects n (%)
Awareness	0-3 (Low)	68 (32.07%)
	4-6 (moderate)	108 (50.94%)
	7-8 (high)	36 (16.99%)
	Total	212 (100%)
Perception	6-12(Negative)	18 (8.49%)
	13-18(Neutral)	83 (39.15%)
	19-24 (Positive)	111 (52.36%)
	Total	212 (100%)
Practice	0-3 (poor)	99 (46.69%)
	4-6 (fair)	62 (29.24%)
	7-9 (good)	51 (24.05%)
	Total	212 (100%)

and principles was positive {(111 (52.36%))} among study participants. Practice was poor among 99 (46.69%) of dental professionals.

Table 3 shows that on applying Pearson's correlation. Awareness regarding, Orthodontic was significantly ($P = 0.02^*$) associated with practice while Perception was significantly associated ($P = 0.00^*$) with Awareness.

Table 3: Correlation analysis of awareness, perception, and practice regarding Orthodontic practice and principles among Non-Orthodontic Specialists by using Pearson's correlation

	Perception		Awareness		Practice	
	r	P	r	P	r	P
Perception	-	-	0.190	0.00*	0.933	1.09
Awareness	1.003	1.01	-	-	1.566	0.02*
Practice	2.099	0.10	-	-	-	-

$P \leq 0.05^*$

Table 4: Correlation analysis of demographic variables with Awareness, Perception, and Practice regarding Orthodontic practice and principles among Non-Orthodontic Specialists by using χ^2 test

Demographic variables	Awareness		Perception		Practice	
	χ^2	P	χ^2	P	χ^2	P
Age group	0.433	0.01**	3.901	1.900	1.311	0.20
Gender	1.034	0.19	0.406	0.111	3.291	0.31
Speciality	2.310	0.09	1.209	0.05*	1.200	0.56
Year of Practice	0.221	0.94	1.023	0.00***	3.459	1.02
Socio-economic status	6.902	0.10	1.111	0.91	2.701	2.34
Number of Orthodontic patients treating per months	0.222	0.32	2.344	0.56	0.190	0.00***

$P \leq 0.05^*$, $P \leq 0.01^{**}$, $P \leq 0.00^{***}$

Table 4 shows that age group was significantly ($P = 0.01^{**}$) associated with awareness of study participants. Specialty and year of practice of dental professional was significantly ($P = 0.05^*$), ($P = 0.00^{***}$) associated with perception regarding Orthodontic practice and principles. Number of Orthodontic patients treating per months was significantly associated ($P = 0.00^{***}$) with Practice of study participants of Orthodontic practice and principles.

Discussion

Malocclusion is the second most basic dental malady in youngsters and youthful grown-ups. In India, the predominance of malocclusion differs from 20% to 43%. For the improvement of the facial appearance, adjustment of dental malocclusion is a significant factor, which is the primary point of the orthodontic treatment.^[1,10] The present examination is a cross-sectional poll study led to decide the mindfulness, viewpoint, and routine with regards to non-Orthodontic Specialty. In the past different studies^[8-11] were led on same subject expresses that mindfulness is restricted and different CDE projects are expected to improve the training.

In the present study, only non-Orthodontic Specialty has been included in the study as compared to the study by Alnusayri MO, *et al.*^[12] in which, along with specialists, general dental practitioners were also included. The reason for not including general dental practitioners is that most of the GDPs (general dental practitioners) do not do Orthodontic treatment as confirmed in pilot study.

In the present study, majority of respondent belonged to age group range from of 25 years to above 40 years of age. In contrary to this, in study by Adegbite KO, *et al.*^[8] age group of respondents ranges from 16 to 40 years while in study by Sastri MR, *et al.*^[11] The age group selected was 30–50 years, to avoid the freshly passed-out students and old practitioners. The reason for selecting age group above 25 years as mean age of completing master's degree in India is above 25 years.

In the present study male participants were much more than female participants. Same results were seen study by Sastri MR, *et al.*^[11] and Alnusayri MO, *et al.*^[12] in which males are more in number than females.

In the present study moderate awareness, positive perception, and poor practice regarding Orthodontic practice and principles was reported. Same results were shown in study by Alnusayri MO, *et al.*^[12] with more positive attitude among Dental specialists. In study by Sastri MR, *et al.*^[11] and Adegbite KO, *et al.*^[8] it was reported that there is a requirement for expanded clinically oriented training and ideas regarding orthodontic therapy. In the study done by Devashish Singh *et al.*^[13] it is shown that need to educate the orthodontic patients toward maintenance of periodontal health which could be done by the non-orthodontic specialist also.

In the present study, it was reported that age group, type of specialty, year of practice and number of orthodontic cases treated per month significantly associated with awareness, perception and practice of dental professionals regarding orthodontic practice and principles. Not a single study in the past tries to explore the factors effecting the awareness, perception and practice of dental professionals regarding orthodontic practice and principles.

The dental professionals are concerned with the prevention and restoration of the dental esthetics and the masticatory function of the patients with maintenance of the phonatics. It is not the sole responsibility of the orthodontic specialist but non-orthodontic specialists have an equal responsibility of preserving it. Loss of any of these functions have the psychological and the social impact which can limit ones role expected to be in the society. So, the present study focuses on the prevention of all these functions Masticatory, Dental Esthetics and Phonatics from the non-orthodontic specialist also.

Conclusion

From above it has been concluded that dental specialists has moderate awareness, positive perception, and poor practice regarding orthodontic practice and principles. Age group, type of specialty, year of practice and number of orthodontic cases treated per month significantly associated with awareness, perception and practice of dental professionals regarding orthodontic practice and principles. Various CDE programs are needed to be conducted to

improve the practice of specialists from other specialties to improve the awareness.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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